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| 科目ナンバリング | | | | | | | | | | |
| 授業科目名 <英訳> | | Chemistry , Society and Environment-E2 Chemistry, Society and Environment-E2 | | | | 担当者所属 職名・氏名 | | エネルギー科学研究科 教授 MCLELLAN , Benjamin | | |
| 群 | 統合科学科目群 | | | 分野(分類) | | 環境 | | 使用言語 | 英語 | |
| 旧群 | B群 | 単位数 | 2単位 | 週コマ数 | 1コマ | 授業形態 | 講義（対面授業科目） | | | |
| 開講年度・ 開講期 | 2025・前期 | | 曜時限 | 水2 | | 配当学年 | 主として1・2回生 | 対象学生 | 理系向 | |
| 【授業の概要・目的】 | | | | | | | | | | |
| <p>Chemistry and chemical processes are very important in both the natural environment and in human society. It is important to understand how chemistry helps to develop the products and services that we utilise, as well as how chemical products from society impact the environment, and how we can mitigate such impacts.</p> <p>This class will introduce some of the important chemical processes and products that shape modern society, as well as examining the influence that they have on the environment. It will cover basic, important chemical processes that occur in nature as well.</p> <p>The course is aimed at those who are not specialists in chemistry, but are interested in chemistry and its application, history and influence.</p> | | | | | | | | | | |
| 【到達目標】 | | | | | | | | | | |
| Students will understand the importance of chemistry and its role in the modern world. Students will understand the importance of chemistry in relation to societal goals and environmental issues. | | | | | | | | | | |
| 【授業計画と内容】 | | | | | | | | | | |
| The following topics will be covered (each numbered item is expected to be one week of class unless otherwise highlighted). | | | | | | | | | | |
| Chemistry introduction | | | | | | | | | | |
| 1. The history of chemistry and its influence on society | | | | | | | | | | |
| 2. The scale of chemical industries and the comparison with global flows | | | | | | | | | | |
| Introduction to the basics of important chemical processes: | | | | | | | | | | |
| 3. Energy chemistry (2 weeks) | | | | | | | | | | |
| 4. Water chemistry (2 weeks) | | | | | | | | | | |
| 5. Petrochemistry | | | | | | | | | | |
| 6. Pharmaceuticals / health chemistry | | | | | | | | | | |
| 7. Mineral chemistry | | | | | | | | | | |
| Environmental issues and chemistry | | | | | | | | | | |
| 8. Global warming impacts | | | | | | | | | | |
| 9. Local chemical pollution | | | | | | | | | | |
| 10. Chemical solutions to environmental problems (2 weeks) | | | | | | | | | | |
| 11. Summary and capstone class | | | | | | | | | | |
| ----- Chemistry , Society and Environment-E2(2)へ続く ----- | | | | | | | | | | |

Chemistry , Society and Environment-E2(2)

【履修要件】

No specific chemical background is needed

Some basic chemical processes will be introduced, but chemistry knowledge will only be assessed in the context of the issues discussed.

【成績評価の方法・観点】

Participation and small exercises (40%)

Final exam or assignment (60%)

【教科書】

未定

【参考書等】

(参考書)

授業中に紹介する

【授業外学修（予習・復習）等】

Small exercises out of class may be expected.

Class slides will be provided for pre-reading.

【その他（オフィスアワー等）】

Typically lectures will be given in class on campus.

Consultation is available by prior arrangement.

【主要授業科目（学部・学科名）】